

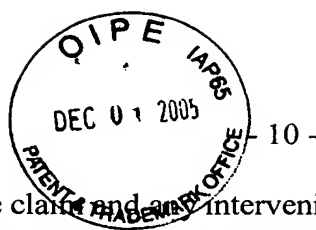
REMARKS

Applicants have amended claims 1 and 24 as set forth above. In view of the above amendments and the following remarks, reconsideration of the outstanding office action is respectfully requested.

The Office has rejected claims 1-5, 7, 8, 10-12, 24-28, 30, and 32 under 35 U.S.C. 102(b) as being anticipated by US Patent No. 4,600,048 to Sato et al (Sato) and claims 6, 9, 29, 42, 45-47, and 50-51 under 35 U.S.C. 103(a) as being unpatentable over Sato. The Office asserts Sato discloses a system for controlling solidification of the molten metal comprising a substrate (1), a writing system (9), an erasing system (17), the writing system is capable for imposing a thermal gradient pattern in multiple elements on the substrate, wherein the writing system is a laser, a drive system (2), a container for molten metal, a nozzle connected to the container, and a pressure system to apply pressure dispense on the nozzle on to the substrate (figure 1). The Office also asserts Applicant's prior amendment, "wherein the gradient pattern comprising multiple element contacts..." is not defined over the prior art of record, since Sato is capable of producing the gradient pattern. The Office asserts that with broadest interpretation of Sato, the pattern can be in one direction having heat spots on the same line. However, the Office asserts the apparatus of Sato is not capable of producing the pattern as shown in Applicant's disclosure in figures 5a and 5b. The Office asserts that in Applicant's drawing the pattern is in a matrix format and the Applicant needs to claim such pattern.

Sato does not disclose or suggest, "wherein the gradient pattern is in a matrix format" as recited in claims 1 and 24. Applicant notes with appreciation the Office's suggestion and accordingly has amended claims 1 and 24 to recite the pattern is in a matrix format. As noted by the Office, Sato does not disclose or suggest such a pattern. In view of the foregoing amendments and remarks, the Office is respectfully requested to reconsider and withdraw this rejection of claims 1 and 24. Since claims 2-12, 42, 45, and 46, depend from and contain the limitations of claim 1 and claims 25-32, 47, 50, and 51 depend from and contain the limitations of claim 24, they are distinguishable over the cited reference and patentable in the same manner as claims 1 and 24.

The Office has objected to claims 43-44 and 48-49 as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of



the limitations of the base claim and any intervening claims. Applicant respectfully traverses this objection because claims 43-44 and 48-49 are already written in independent form. In view of the foregoing amendments and remarks, the Office is respectfully requested to reconsider and withdraw this objection.

In view of all of the foregoing, applicant submits that this case is in condition for allowance and such allowance is earnestly solicited.

Respectfully submitted,

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